

Due Date: September 21, 2009

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:

Inventor: Robert G. Arsenault et al.

Serial #: 10/759,679

Filed: January 19, 2004

Title: VIRTUAL VIDEO ON DEMAND USING  
MULTIPLE ENCRYPTED VIDEO SEGMENTS

Examiner: Ricky Chin

Group Art Unit: 2423

Appeal No.: \_\_\_\_\_

**SUBSTITUTE BRIEF OF APPELLANTS**

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

In accordance with 37 CFR §41.37, Appellants hereby submit a Substitute Appellants' Brief on Appeal from the final rejection in the above-identified application, as set forth in the Final Office Action dated February 18, 2009. This Substitute Appellant' Brief is in response to the Notification of Non-Compliant Appeal Brief mailed August 21, 2009.

It is believed that no fees are due at this time. If any fees are deemed necessary, please charge any additional fees or credit any overpayments to Deposit Account No. 50-0383 of The DIRECTV Group Inc., the assignee of the present application.

## I. REAL PARTY IN INTEREST

The real party in interest is THE DIRECTV GROUP, INC., the assignee of the present application.

## II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences for the above-referenced patent application.

## III. STATUS OF CLAIMS

Claims 1-19, 23-43 and 47 were previously canceled.

Claims 20-22, 44-46 and 48-57 are pending in the application.

Claims 20, 21, 44, 45, 48 and 50-52 were rejected under 35 U.S.C. §103(a) as being obvious in view of Ebisawa, U.S. Patent 6,263,504 (Ebisawa) and Artigalas et al., U.S. Patent 6,091,883 (Artigalas), and these rejections are being appealed.

Claims 22 and 46 were rejected under 35 U.S.C. §103(a) as being obvious in view of Ebisawa, Artigalas and Reynolds et al., U.S. Patent 6,934,963 (Reynolds), and these rejections are being appealed.

Claims 49 and 53-57 were rejected under 35 U.S.C. §103(a) as being obvious in view of Ebisawa, Artigalas and Okura et al., U.S. Patent 6,487,722 (Okura), and these rejections are being appealed.

## IV. STATUS OF AMENDMENTS

No amendments to the claims have been entered subsequent to the final Office Action.

## V. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed subject matter can be found in the Applicant's specification as filed as shown below:

Claim Element(s)	Support in Specification
20. (ORIGINAL) A method of storing a video program in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission separated in time from a preceding transmission of the video program by a retransmission interval and being transmitted on a different channel than the previous transmission, the method comprising the steps of:	FIG. 6; page 16, lines 5-15
selecting at least one of a plurality of video programs; and	page 2, lines 21-29; page 3, lines 13-19; page 4, lines 17-32
receiving a plurality of time segments of the selected video program in parallel, wherein each of the time segments is received on a different one of the channels.	page 2, lines 21-29; page 3, lines 13-19; page 4, lines 17-32
44. (PREVIOUSLY PRESENTED) An apparatus for storing a video program in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission separated in time from a preceding transmission of the video program by a	FIG. 6; FIG. 5; FIG. 2, item 200 page 16, lines 5-15

Claim Element(s)	Support in Specification
retransmission interval and being transmitted on a different channel than the previous transmission, the apparatus comprising:	
means for selecting at least one of a plurality of video programs; and	FIG. 2, item 210 (microcontroller); item 22 (keyboard/IR receiver)
means for receiving a plurality of time segments of the selected video program in parallel, wherein each of the time segments is received on a different one of the channels.	FIG. 2, item 200 (LNBA), item 204 (tuner/demod), item 208 (transport module); item 206 (FEC decoder), item 212 (access card); item 210 (microcontroller)
48. (ORIGINAL) An apparatus for providing a video program in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission temporally separated from a previous transmission by a retransmission interval and being transmitted on a different channel than the previous transmission, the apparatus comprising:	FIG. 6; page 16, lines 5-15
an input device for accepting a selection of at least one of a plurality of video programs for VOD service;	FIG. 2, item 210 (microcontroller); item 224 (keyboard/IR receiver); page 9, lines 8-15, page 24, lines 3-19.
a tuner for receiving multiple segments of the selected video program in parallel, wherein each segment is received on one of the plurality of channels; and	FIG. 2, item 204 (tuner/demod); page 7, line 11 - page 8, line 9.
a storage device, for pre-storing a first segment of the selected video program, and for	FIG. 2, item 232 (storage device); page 9, line 21 - page 10, line 4

Claim Element(s)	Support in Specification
storing subsequent segments of the selected video program in parallel while retrieving the pre-stored first segment of the selected video program.	
50. (PREVIOUSLY PRESENTED) An apparatus for providing a video program transmitted in time segments on a plurality of channels in response to a user demand, comprising:	FIG. 6; page 16, lines 5-15
an input device for accepting a selection of at least one of a plurality of video programs for VOD service;	FIG. 2, item 210 (microcontroller); item 224 (keyboard/IR receiver); page 9, lines 8-15, page 24, lines 3-19.
a tuner for receiving time segments of the selected video program in parallel, wherein each segment is received on one of the plurality of channels; and	FIG. 2, item 204 (tuner/demod); page 7, line 11 - page 8, line 9.
a storage device, for storing the time segments of the selected video program in parallel wherein each of the time segments is received on a different one of the channels.	FIG. 2, item 232 (storage device); page 9, line 21 - page 10, line 4
52. (PREVIOUSLY PRESENTED) A method of pre-storing a video program to be later provided in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission temporally separated from a previous	FIG. 6; page 16, lines 5-15

Claim Element(s)	Support in Specification
transmission by a retransmission interval and being transmitted on a different channel than the previous transmission, the method comprising the steps of:	
receiving and storing a first segment of a selected video program in a local storage device before accepting a user to view the video program, wherein a temporal length of the first segment is substantially equivalent to the retransmission interval; and	page 4, lines 8-16; FIG. 7A, block 708
wherein portions of the first segment are received and stored on the plurality of channels in parallel.	page 2, lines 21-29

## VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 20, 21, 44, 45, 48 and 50-52 are patentable under 35 U.S.C. §103(a) over Ebisawa in view of Artigalas.

Whether claims 22 and 46 are patentable under 35 U.S.C. §103(a) over Ebisawa and Artigalas in view of Reynolds.

Whether claims 49 and 53-57 are patentable under 35 U.S.C. §103(a) over Ebisawa and Artigalas in view of Okura.

## VII. ARGUMENT

### A. The References

#### 1. *The Ebisawa Reference*

U.S. Patent No. 6,263,504, issued July 17, 2001 to Ebisawa discloses a data delivery system, data receiving apparatus, and storage medium for video programs. A data storage unit is provided in a receiving apparatus, whereby a video program can be provided with an instantaneous response equivalent to the VOD system. Namely, the data of the first part of the video data is stored in the

data storage unit in advance. When there is a request for reproduction, that stored data is immediately reproduced. The data after the first data is sent from a transmitting apparatus in the same way as an NVOD system heretofore. Buffering is performed in the receiving apparatus, and the resultant data is reproduced continuous with the data of the first part.

## *2. The Artigas Reference*

U.S. Patent No.6,091,883, issued July 18, 2000 to Artigas et al. discloses a method and device for recording and reading on a large-capacity medium. The disclosure relates to a recording and reading apparatus constituting a kind of video reservoir in the home of the consumer. Thanks to a large-capacity storing technique with suitable technical device, broadcasters transmit numerous programs via specific channels and the consumer may control the content of his reservoir (by recording, reading and erasing programs). The invention is applicable to on-demand video in the consumer's home with a video reservoir constituting a video-library that is regularly updated by broadcasters and/or by the consumer himself.

## *3. The Reynolds Reference*

U.S. Patent No. 6,934,963, issued August 23, 2005 to Reynolds et al. discloses an interactive television program guide with passive content. A hybrid passive-interactive program guide is generated by combining the features of an interactive program guide with the passive video portion of a passive program guide. The interactive guide may replace passive listings with interactive listings, replace passive features with interactive features, provide supplemental advertisements, or replace passive tagging information with interactive tagging information. Users may be provided with an opportunity to purchase a program or product being advertised, to view listings for segments aired in the video portion of the passive guide, to schedule reminders for listings or video segments that are displayed by the passive guide, or to schedule video segments and related information for recording.

#### 4. *The Okura Reference*

U.S. Patent No. 6,487,722, issued November 26, 2002 to Okura et al. disclose an EPG transmitting apparatus and method, EPG receiving apparatus and method, EPG transmitting/receiving system and method, and provider. The broadcast hour and the title of a program is displayed in an EPG (Electronic Program Guide). If the charge of the program is lower than the other corresponding programs, a symbol "Discount" is also displayed. If the program is the last one of NVOD (Near Video On Demand) programs, a symbol "Last" is also displayed.

B. Claims 20, 21, 44, 45, 48 and 50-52 are patentable under 35 U.S.C. §103(a) over Ebisawa in view of Artigalas

In paragraph 6, the Office Action rejected claims 20, 21, 44, 45, 48 and 50-52 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent 6,263,504 (Ebisawa) in view of, U.S. Patent 6,091,883 (Artigalas). The Applicants respectfully traverse this rejection.

With Respect to Claims 20-21: Claim 20 recites:

*A method of storing a video program in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission separated in time from a preceding transmission of the video program by a retransmission interval and being transmitted on a different channel than the previous transmission, the method comprising the steps of:*  
*selecting at least one of a plurality of video programs; and*  
*receiving a plurality of time segments of the selected video program in parallel, wherein each of the time segments is received on a different one of the channels.*

Ebisawa is said to disclose a method of storing a video program in response to a user demand (col. 6, lines 12-34), wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission separated in time from a preceding transmission of the video program by a retransmission interval and being transmitted on a different channel than the previous transmission, and selecting at least one of a plurality of video programs.

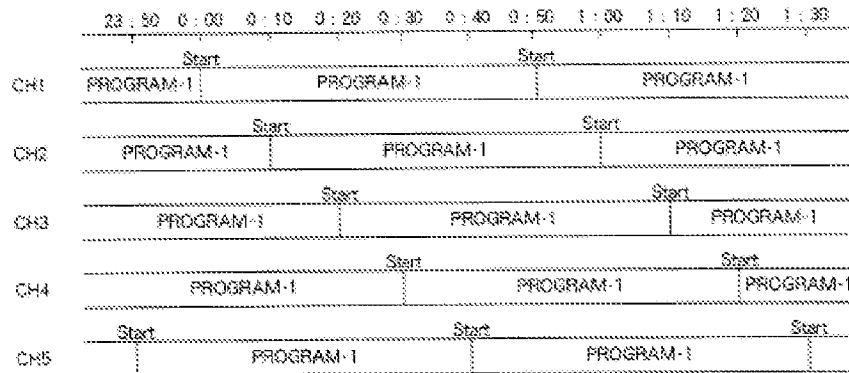
The Applicants disagree. Ebisawa does not teach a system wherein the video program is repeatedly transmitted. Instead, only a portion (the final 50 of the 60 minutes of the program) is transmitted:



In the present embodiment, the data delivery system 1 sends six one-hour programs PROGRAM-1 to PROGRAM-6 as shown in FIG. 2. For this purpose, first, the 50 minutes of video data from the 10th minute to 60th minutes of each program is input to five data transmitting units  $H_{i,1}$  to  $H_{i,5}$  from the video data storage device. Namely, the 50 minutes of video data of the program PROGRAM-1 is input to the first to fifth data transmitting units  $H_{1,1}$  to  $H_{1,5}$ ; the 50 minutes of video data of the program PROGRAM-2 is input to the sixth to 10th data transmitting units  $H_{2,1}$  to  $H_{2,5}$ ; the 50 minutes of video data of the program PROGRAM-3 is input to the 11th to 15th data transmitting units  $H_{3,1}$  to  $H_{3,5}$ ; the 50 minutes of video data of the program PROGRAM-4 is input to the 16th to 20th data transmitting units  $H_{4,1}$  to  $H_{4,5}$ ; the 50 minutes of video data of the program PROGRAM-5 is input to the 21st to 25th data transmitting units  $H_{5,1}$  to  $H_{5,5}$ ; and then the 50 minutes of video data of the program PROGRAM-6 is input to the 26th to 30th data transmitting units  $H_{6,1}$  to  $H_{6,5}$ . Then, for each program, video data staggered by 10 minutes each is reproduced at the data transmitting units  $H_{i,j}$  to  $H_{i,5}$  ( $i=1, 6, 11, 16, 21, 26$ ). For example, for the program PROGRAM-1, five data streams each staggered by 10 minutes as shown in FIG. 3 are generated and output to the channels.

(col. 4, lines 11-36)

FIG. 3



The Office Action acknowledges that Ebisawa does not teach the process of receiving the time segments of the media program in parallel, but alleges that Artigalas discloses this feature as follows:

device including:

means of reception frequency selection enabling recep-  
tion of one or more broadcasting channels simulta-  
neously;

and

The device of the invention can be incorporated in a  
television decoder or in a television receiver. As shown in  
FIG. 1, the device of the invention includes means of  
frequency selection 1 able to provide signals from one or  
more channels in parallel, the channels being picked up by  
an antenna 2 in the case of an air or satellite broadcast or  
received via a cable network. Said means of frequency  
selection 1 can include one or more analog and/or digital  
"tuners", in order to provide several channels of programs in  
parallel. The signals output by said means of frequency  
selection 1 are processed by means of digital encoding 3  
which convert, if need be, the analog signals into digital  
signals and possibly assure the digital compression and/or  
multiplexing of the received signals. The encoded digital  
signals are then fed to the means of recording and reading 4  
to be recorded on a large-capacity recording medium 4a.  
Means of control 5 along with a user interface module 6 (in  
the form of buttons integrated in the device or a remote  
controller) enable the user to control the means of frequency  
selection 1 and the means of recording and reading 4.  
As indicated previously, the means of recording and  
reading 4 can use the matrix-head magnetic recording tech-  
nique or the techniques of digital video cassettes (in which  
case the means of digital encoding 3 also assure the multi-  
plexing if two or more channels are to be recorded in parallel  
on the recording medium 4a).

However, while the foregoing discloses the reception of more than one channel in parallel, it  
also teaches that *different* programs transmitted (and recorded) on each of the channels. This is to  
allow the viewer to record different TV programs at the same time:

A problem arises when the viewer is interested in several  
programs broadcast at the same time or when several  
members of his family with different tastes share the same  
TV set. To resolve this problem, one solution would be  
simply to acquire more TVs and VCRs, but this solution is  
costly and the correction and use of several recorders in  
parallel can be problematic.

A viewer may also wish to record a number of TV  
programs when he is not watching the television (during the  
day when he is at work or during the night). The present  
solution is to program the video recorder to record sequen-  
tially in time a number of programs selected in advance.  
However, a problem arises if the programs are not broadcast  
at the time announced; there is also the problem of the  
limited recording capacity (a few hours at most) of present  
video cassettes. These constraints seriously limit the free-  
dom of the user to record programs of interest.

(col. 1, lines 21-37)

55 The recording and reading functions are advantageously  
independent of each other, in order to allow reading of one  
or more recorded programs while recording other programs.  
The consumer is then able to update the content of his video  
and/or audio reservoir at any time.  
60 The method preferably enables programs designated by  
the user to be locked, so that they can not be erased. In this  
way the user can build up a personal collection of protected  
recordings. To delete one of the recordings, the user must  
first unlock it, then erase it from the recording medium.  
65 Advantageously, the method enables simultaneous  
recording and/or reading of several programs in order to

(col. 2, lines 55 et seq.)

Accordingly, even when combined, Ebisawa and Artigalas fail to teach the invention described in claim 20.

The Office Action also argues that it would have been obvious for one of ordinary skill in the art to combine Ebisawa and Artigalas for the benefit of providing the user with a more minimal waiting time and to be able to provide playback functions. The Applicants disagree for the reasons described below.

*1. One of Ordinary Skill in the Art Would Not Combine Ebisawa and Artigalas as Suggested*

The Applicants respectfully disagree that one of ordinary skill in the art would combine Ebisawa and Artigalas as suggested. Both are directed to the notion of how to provide video programs to users so that they can be played back on demand. Both recognize that bandwidth requirements make it difficult to do so, and each reference offers an entirely different solution than the other.

Ebisawa teaches that immediate access to a media program be provided by pre-storing the initial portion of the media program, then downloading the remainder while the initial portion is being played back. In this way, transmission and storage requirements are reduced. Artigalas teaches that a plurality of media programs, in their entirety, be transmitted on different channels and downloaded in advance. Artigalas requires no more transmission bandwidth, because the programs are transmitted on different channels for real-time viewers anyway. However, Artigalas requires substantial storage capability. Ebisawa requires a substantial amount of transmission bandwidth, but less storage. Accordingly, Artigalas and Ebisawa offer *different* solutions to the same problem, and teach away from any such combination.

“A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. The degree of teaching away will of course depend on the particular facts; in general, a reference’s disclosure will teach away if it suggests that the line of development flowing from the reference’s disclosure is unlikely to be productive of the result sought by the Applicant.” *In re Gurley*, 27 F.3d 551, 553, 31 U.S.P.Q.2d 1130 (Fed. Cir. 1994).

The Final Office Action disagrees, stating:

The examiner respectfully disagrees. Ebisawa and Artigalas both transmit and receive content from different channels requiring transmission bandwidth. Furthermore, the storage capability is relative to the capabilities of the user storage apparatus in which both Ebisawa and Artigalas contain enough capacity to store content from a plurality of channels. Having more storage capacity is merely a design preference of the storing apparatus and would have been obvious for Ebisawa to incorporate having more storage capabilities as to be able to store more programming. Therefore, Artigalas and Ebisawa do not offer different solutions as they both require transmission bandwidth for transmitting simultaneously and receiving content from multiple channels and storage capabilities for storing the content. Thus, because the modification of Ebisawa in view of Artigalas for the benefit of providing the user with a more minimal waiting time and to be able to provide playback functions would be rendered appropriate and operable to one of ordinary skill in the art.

The Applicants respond:

*Ebisawa and Artigalas both transmit and receive content from different channels requiring transmission bandwidth:* It is true that both Ebisawa and Artigalas transmit and receive content with different channels requiring transmission bandwidth. But this statement is far too general to make any conclusions about the appropriateness of combining the references ... even walkie-talkies transmit and receive content with different channels requiring transmission bandwidth.

*Furthermore, the storage capability is relative to the capabilities of the user storage apparatus in which both Ebisawa and Artigalas contain enough capacity to store content from a plurality of channels:* The Applicants do not understand the “relative” statement, but would concede that both Ebisawa and Artigalas would be designed to contain enough capacity to store content from a plurality of channels. That is one of the reasons that the suggested combination of Ebisawa and Artigalas is improper. Artigalas teaches that if one wants to provide media programs to the user without delay, it should be accomplished by

downloading a number of video programs in advance, and allowing the user to choose from them. This does not cause bandwidth problems, but does require a lot of storage capacity. As the Final Office Action appears to concede, if access to more media programs was required, one of ordinary skill in the art would simply add more storage capacity to meet the user's requirements.

Having more storage capacity is merely a design preference of the storing apparatus and would have been obvious for Ebisawa to incorporate having more storage capabilities as to be able to store more programming: The Applicants concede that one of ordinary skill in the art would design the Ebisawa appliance with enough memory to store enough to meet its storage needs. But the Applicants also point out that Ebisawa teaches minimizing the storage requirements by pre-storing only a portion of the media program in advance.

Therefore, Artigalas and Ebisawa do not offer different solutions as they both require transmission bandwidth for transmitting simultaneously and receiving content from multiple channels and storage capabilities for storing the content: Artigalas and Ebisawa both require transmission bandwidth and storage capacities, and they both simultaneously receive content. But when considering the problem at hand .... that of providing video-on-demand within storage and transmission constraints ... they take opposite approaches and therefore indeed teach away from one another. Again, Ebisawa teaches solving the problem by pre-storing the media program, but only a portion of the media program, so as to save storage space. This solution reduces storage requirements at the cost of additional transmission bandwidth (since multiple channels are needed). Artigalas merely teaches storing different programs, each on a different channel, in their entirety. This relieves transmission requirements, but at the cost of substantially increased memory requirements. Artigalas and Ebisawa indeed offer different solutions to the VOD problem. One sacrifices storage for transmission bandwidth, and one sacrifices transmission bandwidth for storage.

Thus, because the modification of Ebisawa in view of Artigalas for the benefit of providing the user with a more minimal waiting time and to be able to provide playback functions would be rendered appropriate and operable to one of ordinary skill in the art: If one of ordinary skill in the art were in possession of the Ebisawa reference and desired a reduction in waiting time and providing playback functionality, they would follow the teaching of the Ebisawa reference. And what the Ebisawa reference teaches would be to

segment the program into a larger number of shorter segments, and transmit them on a greater number of channels. This appears to be specifically taught by Ebisawa as follows:

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Then, based on a control signal input from the control unit 14, video data staggered by the time  $t$  is reproduced in the  $m-1$  number of data transmitting units 11<sub>1-1</sub> to 11<sub>1-m+1</sub>. The video data after the time  $t$  is sequentially output to the  $m-1$  number of channels staggered by the time  $t$ .

Note that, the time  $t$  and the number  $m$  divided by are set to adequate values according to the number of the usable channels, the number of the programs to be provided, the storage capacity of the data storage unit 22 of the receiving apparatus 20 mentioned later, etc.

It is also worthwhile to note that the art is crowded with video-on-demand technology, and such systems provide the proffered rationale (reducing waiting time and providing playback functionality) using techniques that are wholly different than the Applicants'. For example, VOD with minimum waiting time is provided by streaming video techniques,<sup>1</sup> and such techniques do not transmit the uncached data in whole segments in parallel via multiple channels. Instead, they use a single higher bandwidth channel to achieve a similar result. Further, server-based VOD systems operate entirely differently, providing the aforementioned playback functionality by issuing commands to the servers or local servers providing the media program.<sup>2</sup> In determining the patentability of the Applicants' invention, the prior art must be considered *as a whole*, and given the express teaching of Ebisawa to simply provide more channels and other elements of the prior art's teaching to provide higher bandwidth and/or server commands, and given Artigalas' teaching to simply cache the entire media program, the Applicants simply cannot agree that one of ordinary skill in the art would have modified Ebisawa as suggested.

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<sup>1</sup> See, for example, USP 7,089,579, issued to Mao Weidong on August 8, 2006.

<sup>2</sup> USP 6,868,452, issued to Eager et al. on March 15, 2005 is an example of such technology.

## 2. *Even When Combined, Ebisawa and Artigalas Do Not Teach the Applicants' Invention*

Even if the teachings of Ebisawa and Artigalas were combined, the combination would not read on the Applicants' claimed invention. Ebisawa teaches pre-storing the first *n* minutes of a media program and transmitting the remainder of the *same program on a different channel* to permit near video on demand. Artigalas teaches transmitting *different programs on different channels* and storing them simultaneously.

Neither Ebisawa nor Artigalas teach the transmission and storage of the *same video program on different channels* at the same time. Ebisawa teaches the transmission of multiple versions of a program at the same time, but *only one of those versions is stored*. Artigalas teaches transmission and storage of *multiple programs* on multiple channels at the same time, but not the same program.

Further, if one of ordinary skill in the art were to modify Ebisawa as described in Artigalas, the result would be a system in which the first *n* minutes of multiple media programs were transmitted on multiple channels for pre-storage in the receiver, not a system in which multiple channels are used to receive and store the *same* program after the program has been requested.

The Final Office Action responds:

With regards to claim 20, applicant argues that Artigalas, while disclosing the reception of more than one channel in parallel, teaches of the programs transmitted as being different programs, thus not reading on the claimed invention since the multiple channels in the claimed invention are used to store the same program and that the combination would result in a system in which the first *n* minutes of multiple media programs were transmitted on multiple channels for pre-storage. The examiner realizes that such a system may result in the combination of Ebisawa and Artigalas but is not limited to only such a system.

The Examiner appears to acknowledge that Ebisawa and Artigalas can be combined to produce a system in which the first *n* minutes of multiple media programs are transmitted on multiple channels for pre-storage, but argues that this is not the only way that the two systems can be combined. But the question is not simply whether it is possible to combine the Ebisawa and Artigalas references in the way the Final Office Action suggests. Rather, the question is what one of ordinary skill in the art, with knowledge of the prior art (which includes the Ebisawa and Artigalas references as well as the references cited above), would solve the problem of minimizing waiting time and providing playback functionality.

The Final Office Action continues:

Accordingly, the transmitting and storing of the same program is well-known in the art as taught by Ebisawa (See fig. 3 and col. 4 lines 11-35, which discloses transmitting a program on different channels offset by a transmission interval). Furthermore, Artigalas teaches of the reception of programs of more than one channel in parallel selected by the user. Hence, whether or not the program is the same of different programs is relative to what is being broadcast on the different channels and of what the user desires and selects. Therefore, it would have been obvious to have modified the teachings of transmitting and receiving the same program as taught by Ebisawa to incorporate reception of more than one channel in parallel as taught by Artigalas for the mere benefit of simultaneous recording of broadcasted content on several channels by which reduces the amount of time needed to store an entire single program or of several videos for simultaneous playback.

But the totality of Artigalas' teaching cannot be ignored. Artigalas also teaches the reception of *different* programs on different channels, for pre-storage of the *entire program* in advance. As the Applicants have pointed out, that is an entirely different solution to the same problem as posed by Ebisawa. The Examiner must consider all of what the prior art teaches, not simply adopt teachings convenient to one arguing obviousness and ignore the others.

Accordingly, the Applicants respectfully traverse the rejection of claim 20 as unpatentable over Ebisawa in view of Artigalas. Claim 21 recites analogous features and is patentable for the same reasons.

With Respect to Claims 44 and 45: Claim 44 recites:

*An apparatus for storing a video program in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission separated in time from a preceding transmission of the video program by a retransmission interval and being transmitted on a different channel than the previous transmission, the method comprising:*

*means for selecting at least one of a plurality of video programs; and*

*means for receiving a plurality of time segments of the selected video program in parallel, wherein each of the time segments is received on a different one of the channels.*

Claim 44 recites features analogous to those of claim 20 and is patentable for the same reasons. Claim 45 recites the features of claim 44 and is patentable for the same reasons.

With Respect to Claims 48: Claim 48 recites:



*An apparatus for providing a video program in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission temporally separated from a previous transmission by a retransmission interval and being transmitted on a different channel than the previous transmission, the apparatus comprising:*

*an input device for accepting a selection of at least one of a plurality of video programs for VOD service;*

*a tuner for receiving multiple segments of the selected video program in parallel, wherein each segment is received on one of the plurality of channels; and*

*a storage device, for pre-storing a first segment of the selected video program, and for storing subsequent segments of the selected video program in parallel while retrieving the pre-stored first segment of the selected video program.*

Claim 48 recites a storage device for receiving multiple segments of *a selected video program* (not several video programs) in parallel, wherein each segment is received on one of a plurality of channels. As described above, Ebisawa and Artigalas do not disclose this feature, and the Ebisawa cannot be modified by Artigalas under 35 U.S.C. § 103(a). Accordingly, the Applicants respectfully traverse.

With Respect to Claims 50 and 51: Claim 50 recites:

*An apparatus for providing a video program transmitted in time segments on a plurality of channels in response to a user demand, comprising:*

*an input device for accepting a selection of at least one of a plurality of video programs for VOD service;*

*a tuner for receiving time segments of the selected video program in parallel, wherein each segment is received on one of the plurality of channels; and*

*a storage device, for storing the time segments of the selected video program in parallel wherein each of the time segments is received on a different one of the channels.*

Claim 50 recites *a storage device, for storing the time segments of the selected video program in parallel wherein each of the time segments is received on a different one of the channels.*

As described above, none of the cited references discloses this feature. Ebisawa teaches pre-storing the a first portion of a video program and receiving and storing the remainder of the program *on one channel* while retrieving the stored first portion. Ebisawa does not teach receiving and storing the same video program on multiple channels.

Artigalas teaches receiving and storing *different programs* on *multiple different channels*, but does not teach receiving and storing *the same program* on *multiple different channels*. Therefore, even when

combined, Ebisawa and Artigalas do not teach the features of claim 50. Ebisawa and Artigalas are not combinable under 35 U.S.C. § 103(a) for the reasons described above. Accordingly, the Applicants respectfully traverse the rejection of claim 50.

Claim 51 recites the same features as claim 50, and is patentable for the same reasons.

With Respect to Claim 52: Claim 52 recites:

*A method of pre-storing a video program to be later provided in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission temporally separated from a previous transmission by a retransmission interval and being transmitted on a different channel than the previous transmission, the method comprising the steps of:*

*receiving and storing a first segment of a selected video program in a local storage device before accepting a user to view the video program, wherein a temporal length of the first segment is substantially equivalent to the retransmission interval; and*

*wherein portions of the first segment are received and stored on the plurality of channels in parallel.*

Claim 52 is even more remote from the teaching of Ebisawa and Artigalas. Unlike claim 48, claim 52 recites that portions of the *first segment* are received and stored on the plurality of channels in parallel. The Final Office Action argues that it is permissible to consider the first segment of the media program as the entire media program:

The combined teaching of Ebisawa and Artigalas also teaches of wherein the portions of the first segment are received and stored on the plurality of channels in parallel. Since the time of retransmission interval is not stated, the first segment can be construed as the entire temporal length of the selected video as a whole, the first segment thereby being pre-stored as the entire selected video. Thus, the portions and time segments of the first segment (the entire selected video program) is received and stored on the plurality of channels in parallel as described in the analysis of claims 20 and 44.

The Applicants disagree. If the first segment of the video program can be interpreted as the entire video program, that would be ascribing no meaning to the term “first segment.” Further, while the Examiner is permitted to read the Applicants claims broadly, that reading must be consistent with the Applicants’ specification, and this interpretation is not.

Further, even if claim 52 were interpreted as broadly as suggested, the Ebisawa and Artigalas do not read on the claim. Neither Ebisawa nor Artigalas, alone or combined, teach the notion of receiving the *same program* (or a first segment of that program) on *multiple channels*.

Finally, the Final Office Action's suggested motivation for combining Ebisawa and Artigalas:

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined the teachings of Ebisawa and Artigalas for the mere benefit of having increased flexibility with channel surfing and being able to satisfy a viewers request for a program in a more timely manner.

does not make sense when one considers that the first segment of the video program is being downloaded in parallel, as that process has taken place *before* the viewer requests viewing the program.

C. Claims 22 and 46 are patentable under 35 U.S.C. §103(a) over Ebisawa and Artigalas in view of Reynolds.

The final Office Action rejected claims 22 and 46 under 35 U.S.C. §103(a) as being unpatentable over Ebisawa in view of Artigalas as applied to claims 20 and 44, and in further view of Reynolds et al., U.S. Patent No. 6,934,963 (Reynolds). Applicants respectfully traverse these rejections for the same reasons as described above.

D. Claims 49 and 53-57 are patentable under 35 U.S.C. §103(a) over Ebisawa and Artigalas in view of Okura.

Applicants respectfully traverse these rejections for the reasons described above.

## VIII. CONCLUSION

In light of the above arguments, Appellants respectfully submit that the cited references do not anticipate nor render obvious the claimed invention. More specifically, Appellants' claims recite novel physical features, which patentably distinguish over any and all references under 35 U.S.C. §§ 102 and 103. As a result, a decision by the Board of Patent Appeals and Interferences reversing the Examiner and directing allowance of the pending claims in the subject application is respectfully solicited.

Respectfully submitted,

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## CLAIMS APPENDIX

1. - 19. (CANCELED)

20. (ORIGINAL) A method of storing a video program in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission separated in time from a preceding transmission of the video program by a retransmission interval and being transmitted on a different channel than the previous transmission, the method comprising the steps of:

selecting at least one of a plurality of video programs; and

receiving a plurality of time segments of the selected video program in parallel, wherein each of the time segments is received on a different one of the channels.

21. (PREVIOUSLY PRESENTED) The method of Claim 20, wherein the time segments of the selected video program are staggered in time by the retransmission interval.

22. (PREVIOUSLY PRESENTED) The method of Claim 20, further comprising the step of:

selecting a second video program for real time reception; and

receiving the selected second video program in real time while receiving the plurality of time segments of the selected at least one of a plurality of video programs in parallel.

23. - 43. (CANCELED)

44. (PREVIOUSLY PRESENTED) An apparatus for storing a video program in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission separated in time from a preceding transmission of the video program by a retransmission interval and being transmitted on a different channel than the previous transmission, the apparatus comprising:

means for selecting at least one of a plurality of video programs; and

means for receiving a plurality of time segments of the selected video program in parallel, wherein each of the time segments is received on a different one of the channels.

45. (ORIGINAL) The apparatus of Claim 44, wherein the time segments of the selected video program are staggered in time by the transmission interval.

46. (ORIGINAL) The apparatus of Claim 44, further comprising:

means for selecting a second video program for real time reception; and

means for receiving the selected second video program in real time while receiving the plurality of time segments of the selected video program in parallel.

47. (CANCELED)

48. (ORIGINAL) An apparatus for providing a video program in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission temporally separated from a previous transmission by a retransmission interval and being transmitted on a different channel than the previous transmission, the apparatus comprising:

an input device for accepting a selection of at least one of a plurality of video programs for VOD service;

a tuner for receiving multiple segments of the selected video program in parallel, wherein each segment is received on one of the plurality of channels; and

a storage device, for pre-storing a first segment of the selected video program, and for storing subsequent segments of the selected video program in parallel while retrieving the pre-stored first segment of the selected video program.

49. (ORIGINAL) The apparatus of Claim 48, further comprising:

a memory for storing a program guide having an entry for each of the video programs; and  
a processor, coupled to the input device and the tuner, and the memory, for scanning the program guide for a VOD service indicator, and for identifying the video program associated with the VOD service indicator as the selected video program.

50. (PREVIOUSLY PRESENTED) An apparatus for providing a video program transmitted in time segments on a plurality of channels in response to a user demand, comprising:

an input device for accepting a selection of at least one of a plurality of video programs for VOD service;

a tuner for receiving time segments of the selected video program in parallel, wherein each segment is received on one of the plurality of channels; and

a storage device, for storing the time segments of the selected video program in parallel wherein each of the time segments is received on a different one of the channels.

51. (PREVIOUSLY PRESENTED) The apparatus of Claim 50, wherein the time segments of the selected video program are staggered in time by the retransmission interval.

52. (PREVIOUSLY PRESENTED) A method of pre-storing a video program to be later provided in response to a user demand, wherein the video program is repeatedly transmitted on one of a plurality of channels, each repeated transmission temporally separated from a previous transmission by a retransmission interval and being transmitted on a different channel than the previous transmission, the method comprising the steps of:

receiving and storing a first segment of a selected video program in a local storage device before accepting a user to view the video program, wherein a temporal length of the first segment is substantially equivalent to the retransmission interval; and

wherein portions of the first segment are received and stored on the plurality of channels in parallel.

53. (PREVIOUSLY PRESENTED) The method of Claim 52, wherein the selected video program is selected by performing steps comprising the steps of:

scanning a program guide having an entry for each of the video programs for a VOD service indicator; and

identifying a video program associated with the VOD service indicator as the selected video program.

54. (PREVIOUSLY PRESENTED) The method of Claim 52, wherein the selected video program is selected by performing steps comprising the steps of:

accepting a selection of at least one of the video programs for VOD service; and

associating the VOD indicator with the entry of each video program selected for VOD service.



55. (PREVIOUSLY PRESENTED) The method of Claim 52, wherein the selected video program is selected by performing steps comprising the steps of:

scanning a program guide having an entry for each of the video programs to identify at least one video program scheduled to be repeatedly transmitted on one of the plurality of channels, each repeated transmission temporally separated from the previous transmission by a retransmission interval and being transmitted on a different channel than the previous transmission; and  
selecting the identified video program as the selected video program.

56. (PREVIOUSLY PRESENTED) The method of Claim 55, wherein the step of scanning the program guide comprises the step of comparing the video program information for each of the entries, wherein the video program information comprises a program title.

57. (PREVIOUSLY PRESENTED) The method of Claim 55, wherein the step of scanning the program guide comprises the step of comparing the video program information for each of the entries, wherein the video program information comprises a unique program identifier.

## **EVIDENCE APPENDIX**

U.S. Patent No 6,263,504 (Ebisawa) Entered by Examiner in Office Action Mailed January 18, 2008 (Page 2)

U.S. Patent No. 6,091,883 (Artigalas) Entered by Examiner in Office Action Mailed January 18, 2008 (Page 2)

U.S. Patent No. 6,934,963 (Reynolds) Entered by Examiner in Office Action Mailed January 18, 2008 (Page 10)

U.S. Patent No. 6,487,722 (Okura) Entered by Examiner in Office Action Mailed January 18, 2008 (Page 11)

U.S. Patent No. 7,089,579 (Weidong) Introduced by Applicant in Amendment after Final Rejection filed April 17, 2009 (page 14, footnote 1)

U.S. Patent No. 6,868,452 (Eager) Introduced by Applicant in Amendment after Final Rejection filed April 17, 2009 (page 14, footnote 2)

**RELATED APPEALS AND INTERFERENCES APPENDIX**

(none)